



## Attachment 2

*Council Report Dated July 11, 2022*

# REPORT

## *Environment and Climate Advisory Committee*

**To:** Mayor Cote and Members of Council      **Date:** July 11, 2022

**From:** Environment and Climate Advisory Committee      **File:** 09.1740.02

**Item #:** 2022-529

**Subject:** **Proposed Energy Step Code Acceleration for Single Detached Dwellings**

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### **RECOMMENDATION**

**THAT** Council direct staff to proceed with work on the acceleration of the Energy Step Code for single detached dwellings in 2023 using a two option framework.

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### **PURPOSE**

To seek Council direction to proceed with work on the acceleration of the Energy Step Code for single detached dwellings in 2023 using the two option framework proposed by the Environment and Climate Advisory Committee. The framework would provide single detached dwellings with the choice to: 1) meet Step 5 of the Energy Step Code, or 2) meet Step 3 with installation of, or connection to, a low carbon energy system (LCES).

### **SUMMARY**

On March 18<sup>th</sup>, 2022, the Environment and Climate Advisory Committee (EnCAC) proposed a motion to accelerate the City's Energy Step Code timeline and adopt a two option framework that would require builders of single detached dwellings to achieve level 5 of the Step Code, the highest standard for building energy efficiency, or achieve level 3 of the Step Code if the builder uses a low carbon (usually electric) system for heat and hot water.

Staff support the proposed framework as it aligns with the City's climate emergency targets and implementation of the City's Bold Step #3 Carbon Free Homes and Buildings. Staff provided an update on this motion to the Environment and Climate Task Force (ECTF) and received direction to present the motion to Council for consideration.

**BACKGROUND**

**Committee Discussion**

At the March 18, 2022 meeting of the Environment and Climate Advisory Committee (EnCAC), it proposed the following motion:

THAT EnCAC encourage New Westminster City Council to adopt a Community Energy and Emissions Plan (CEEP) which includes a plan to create regulations by 2023 in New West for new construction of single family dwellings that require builders to achieve level 5 of the Step Code, the highest standard for building energy efficiency, or if the builder uses a low-carbon (usually electric) system for heat and hot water, the Step Code is relaxed to level 3.

The EnCAC discussed the proposed motion and the tradeoffs between prioritizing building electrification and improved energy efficiency. There was also discussion on upcoming Building Code changes that will incorporate a carbon pollution standard, which would give local municipalities the ability to regulate fuel selection.

At the EnCAC meeting on May 18, 2022, staff presented additional background on the City’s implementation of the Energy Step Code, and highlighted key considerations related to the proposed motion. The EnCAC subsequently passed the motion.

The Minute Excerpt from the March 18, 2022 and the draft Minute Excerpt May 18, 2022 EnCAC meeting are included in Attachment 1.

Staff provided an update on this motion to the Environment and Climate Task Force at its June 13, 2022 meeting. The Task Force supported the EnCAC motion to accelerate the City’s Energy Step Code timeline and to adopt the two option framework in 2023, and directed staff to present the motion to Council for consideration.

**STAFF COMMENT**

The BC Energy Step Code is an optional, better-than-Code, energy efficiency compliance path in the BC Building Code. In recent years, many local governments across BC have adopted the BC Energy Step Code into their policies and regulations to support meeting their climate objectives and reduce emissions from buildings.

On February 25, 2019, Council adopted Step Code for new Part 9 (smaller residential buildings) and Part 3 (multi-unit residential over four storeys, and most office and commercial buildings). See Attachment 2 to this report. As per the City’s existing requirements, single detached dwellings are required to be built to Step 3 of the Step Code (without any controls or incentives as to fuel source). The City’s existing requirements also indicate the intent to offer a two option framework for Part 3 multi-unit residential buildings. However, an approved LCES has yet to be established by the City, which means all projects are being designed to Step 3, instead of Step 2 with a LCES.

If EnCAC’s proposal is adopted, the two option framework proposed by EnCAC would provide single detached dwelling applicants with two choices:

- 1. Meet Step 5 (the highest performance level) of the Energy Step Code; or,
- 2. Meet Step 3 (the current performance level) of the Energy Step Code with installation of, or connection to, a Low Carbon Energy System (LCES).

The BC Energy Step Code has been effective in reducing the total amount of thermal and mechanical energy used in a new building. Currently, the Energy Step Code is agnostic to fuel source, as its primary intention is to improve energy efficiency through building envelope. Therefore, the proposed framework seeks to incentivize the installation of a low carbon energy system that provides energy efficient heating and cooling services powered by low-carbon BC grid electricity. Builders can avoid the higher investment in the building envelope, as is required to meet Step Code 5, by installing a low carbon energy system.

Staff recommends the proposed framework as it supports the City’s climate emergency targets and implementation of the City’s Bold Step #3 Carbon Free Homes and Buildings. An inventory based on 2016 data found that residential buildings are responsible for 22% of New Westminster’s community-wide emissions. In terms of the city’s total emissions by fuel type, natural gas accounts for the largest source of emissions (43%) and is used in all building types.

Prior to the proposed motion, staff collaborated with Energy Save New West to host a series of virtual ‘Builder Breakfasts’ for local homebuilders and developers of Part 9 residential buildings. Amongst other topics, these sessions gathered feedback on a similar proposal to accelerate Energy Step Code using a two option framework. Participants were in favour of the proposal as it would provide two paths to satisfy the Building Bylaw requirements. Participants identified a desire for training, guidance from Building staff, and incentives.

Other municipalities, such as the District of North Vancouver, West Vancouver, Vancouver, and Richmond have already implemented a similar two option framework. The lessons learned from their implementation can help inform the deployment of New Westminster’s two option Step Code framework. Lessons learned from this research and from the implementation of a two option program for single detached dwellings would also inform the City’s next steps in applying the two option framework to Part 3 multi-unit residential buildings. With the implementation of a LCES option for Part 3 buildings, the intent is to allow connection to the City’s District Energy System as one of the approved low carbon energy systems.

**NEXT STEPS**

Accelerated Step Code implementation that incentivizes builders to install a Low Carbon Energy System powered by low-carbon BC grid electricity will have implications to the New Westminster electrical grid and on internal processes related to permitting and

inspections. Further consultation with staff, the Utility Commission, and industry is required to gauge impacts, identify potential risks, and explore solutions to successfully implement the proposed accelerated Step Code schedule in 2023.

Staff anticipate undertaking the following steps to implement the proposed accelerated Energy Step Code in 2023:

- Research approach and lessons from other local municipalities that have implemented the same framework.
- Develop procedures to support processing applications using a LCES pathway.
- Consult with the staff, the Utility Commission, and industry representatives.
- Present Building Bylaw Amendment for consideration by Council.
- Distribute notification regarding changes being implemented.
- Implement the accelerated Energy Step Code two option framework.
- Continue to support industry and staff training and capacity building related to LCES and high performance building (e.g. through Energy Save New West).

**FINANCIAL IMPLICATIONS**

There are no financial implications at this time; however, staff resources will be needed to implement the proposed framework.

**OPTIONS**

The following options are provided for Council’s consideration:

1. That Council direct staff to proceed with work on the acceleration of the Energy Step Code for single detached dwellings in 2023 using a two option framework.
2. That Council provide staff with alternative direction.

Staff recommend Option 1.

**ATTACHMENTS**

- Attachment 1 – Environment and Climate Advisory Committee Minute Extracts
- Attachment 2 – New Westminster’s Existing Energy Strep Code Requirements

**APPROVALS**

This report was prepared by:

Nayel Halim, Community Energy and Emissions Specialist

This report was reviewed by:

Katie Stobbart, Committee Clerk

Lynn Roxburgh, Supervisor of Land Use Planning and Climate Action

Serena Trachta, Manager Building Inspection Services

Emilie Adin, Director, Climate Action, Planning and Development

This report was approved by:

Serena Trachta, Acting Director, Climate Action, Planning and Development

Lisa Spitale, Chief Administrative Officer

**Attachment 1**  
*Environment & Climate Advisory Committee*  
*Meeting Minutes*

**MARCH 16, 2022 ENVIRONMENT AND CLIMATE ADVISORY COMMITTEE MEETING DRAFT MINUTES EXTRACT**

**7.2 New Homes and Renewable Energy**

Karen Crosby, Community Member, raised the topic of discussing speeding up the requirement for new homes and buildings to only use renewable energy, rather than natural gas hookups.

MOVED and SECONDED

THAT ENCAC encourages New Westminster City Council to adopt a CEEP which includes a plan to create regulations by 2023 in New Westminster for new construction of single family dwellings that require builders to achieve level 5 of the STEP code, the highest standard for building energy efficiency, or if the builder uses a low-carbon (usually electric) system for heat and hot water, the STEP code is relaxed to level 3.

**Procedural note:** This motion did not go to a vote as the Committee wished for more information on Step Code before continuing the discussion.

The Committee had the following comments arising from discussion:

- Appreciate the intent of the motion, but it may not capture all considerations. Rather than just avoiding natural gas, would like to encourage a holistic approach which encourages builders to consider the building envelope and total efficiency of the system; and
- We need to also work to reduce consumption, and replacing everything with electricity may not be the answer. May want to amend the wording of the motion.

MOVED and SECONDED

THAT the Environment and Climate Advisory Committee postpone New Homes and Renewable Energy to the next meeting so that staff may provide more information to the Committee about STEP code.

**Carried.**

All members present voted in favour of the motion.

**MAY 18, 2022 ENVIRONMENT AND CLIMATE ADVISORY COMMITTEE MEETING DRAFT MINUTES EXTRACT**



## **6. UNFINISHED BUSINESS FROM PREVIOUS MEETINGS**

### **6.1 New Homes and Renewable Energy**

*With discussion of Energy Step Code - Nayel Halim*

Karen Crosby, Community Member, prefaced the conversation by highlighting the slide: The Case for Electrifying from the Energy Step Code presentation that was sent ahead to the committee. She noted the following:

- Electric heating without gas is much better than any step code level at reducing greenhouse gas emissions;
- There are tradeoffs in any policy decision, and some level of energy efficiency will be lost with this proposal, but emissions would be lower overall, which must be our focus if we are to effectively solve the climate crisis;
- The energy step code seems to be designed to reduce energy demand in buildings, not necessarily change from fossil fuels to renewable energy, but the climate crisis demands that we make that change;
- If we continue to build with gas infrastructure, we will lock ourselves into another 20 to 100 years of burning gas in these buildings depending on how long the buildings last and how much (expensive) retrofitting happens; and
- To solve the climate crisis we need to realize there are large forces at play, and we need to be the strongest, most collective voice we can be to change the status quo away from burning gas as quickly as possible.

The Committee noted that one of the big challenges with electric heating is proper insulation, as older home technology is outdated; there are many homes in which it is very expensive to run electric heating.

Nayel Halim, Community Energy and Emissions Specialist, and Lynn Roxburgh, Acting Supervisor, Land Use Planning and Climate Action, provided a presentation entitled “Energy Step Code: An Overview” which included a summary of the committee’s discussion from March 16, and a brief summary of the Climate Action Work Plan and next steps that would be taken following the potential approval of this motion, as well as a high-level overview of Step Code. In response to questions from the Committee, Mr. Halim and Ms. Roxburgh noted:

- Net Zero Energy Ready is defined in the Step Code, just categorized as “future-proofed” to be able to transition to net zero. It does not explicitly state that Step Code would achieve net zero; and
- Currently where the industry is at, steps four and five feels out of reach to the industry, and our current requirement is step three, which is the right step to offer for the incentive to be meaningful.

The Committee noted that one concern with mandating this is affordability, particularly for single-family homes. Serena Trachta, Manager, Inspections, advised that there is no good done by building a building that is not energy efficient.

**Procedural Note:** Teresa Morton left the meeting at 6:50 p.m.

MOVED and SECONDED

THAT EnCAC encourage New Westminster City Council to adopt a CEEP which includes a plan to create regulations by 2023 in New Westminster for new construction of single family dwellings that require builders to achieve level 5 of the Step code, the highest standard for building energy efficiency, or if the builder uses a low-carbon (usually electric) system for heat and hot water, the Step Code is relaxed to level 3.

**Carried.**

All members present voted in favour of the motion.

Attachment 2  
*New Westminster's Existing Energy Step Code  
Requirements*

**CITY BUILDING BYLAW REQUIREMENT**

<i>Building Permit applications filed on or after</i>		
<b>Part 9 Residential</b>	<b>March 31, 2019</b>	<b>January 1, 2020</b>
Single Detached and Semi-Detached Homes	Step 1	Step 3
Laneway and Carriage houses	Step 1	Step 2
Triplexes, Townhomes and Stacked Townhomes*	Step 1	Step 3
<b>Part 3 Multi-Unit Residential</b>	<b>March 31, 2019</b>	<b>January 1, 2020</b>
Wood-Frame Residential	N/A	Step 3 <b>[OR]</b> Step 2 with approved <b>Low Carbon Energy System</b> †
Concrete Residential		
Hotels/Motels°		
<b>Part 3 Commercial</b>	<b>March 31, 2019</b>	<b>January 1, 2020</b>
Office	N/A	Step 2
Retail / Mercantile (Group D and E Occupancies)		

*Note: The City is not accepting applications under the Low Carbon Energy System (LCES) option until additional policy development is complete.*